MONTANA TEEN DRIVER CURRICULUM 2.0 GUIDE
Lesson Plan & Teacher Commentary

Module 2.2 – Basic Control and Vehicle Location

Lesson Objective (from *Essential Knowledge and Skills Topics*):

Topic 6. Performing Basic Maneuvers

1. The student is expected to describe and demonstrate:
   a. the pre-drive and starting tasks;
   b. the four (4) steering wheel control techniques and when each is used;
   c. procedures for entering and leaving the roadway;
   d. acceleration control;
   e. controlled, threshold, and trail braking control;
   f. procedures for left and right precision turns from a stopped and moving position; and
   g. procedures for backing straight and while turning.

Topic 7. Standard Vehicle Reference Points

1. The student is expected to identify, describe and demonstrate:
   a. knowledge of the blind areas to the front, sides, and rear of a vehicle while seated in the driver's seat of a vehicle;
   b. knowledge of how targeting establishes steering accuracy and helps develop a systematic searching habit;
   c. a visual reference point that will place the front bumper at a line or curb;
   d. a visual reference point that will place the right side tires 3-6 inches, 3 feet, and 6 feet from a line or curb;
   e. a visual reference point that will place the left side tires 3-6 inches from a line or curb;
   f. a visual reference point for placement of a vehicle in the center of a lane;
   g. visual reference points for placement of the rear bumper at a line or curb; and
   h. lane placement and reference points for setup, entry to, and exiting from a turn.

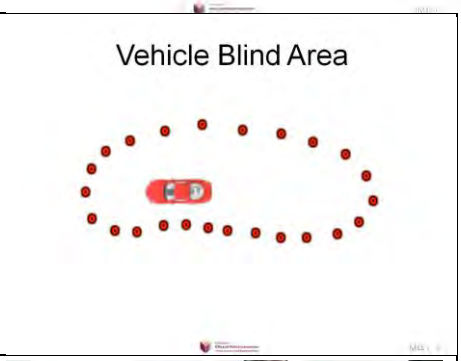
Materials Needed:

1. Module 2.2 PowerPoint Presentation
2. Module 2.2 Fact and Work Sheets (printed out)
3. Module 2.2 PEPs
4. Module 2.2 Teacher Commentary (printed out)

Module 2.2 Teacher Commentary

This teacher commentary can be used in conjunction with the PowerPoint presentation for this module. The module slide images are provided to allow you to connect the materials, data, and questions with the presentation.

Slide 2 – Vehicle Blind Area



Slide 3 – Vehicle Blind Area

This person is standing at the front bumper of this car. Notice that you can see nothing from the waist down because your vision is blocked by the dashboard and front of the car.

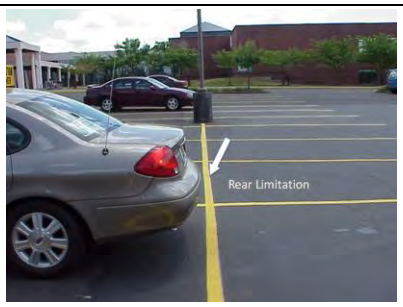
Slide 4 – Vehicle Blind Area

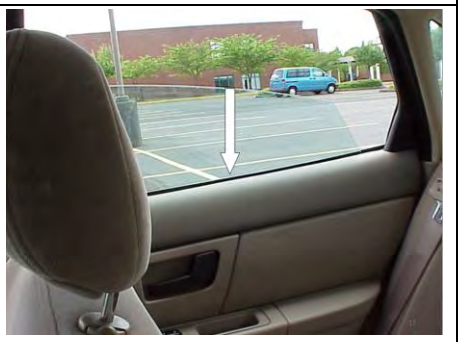
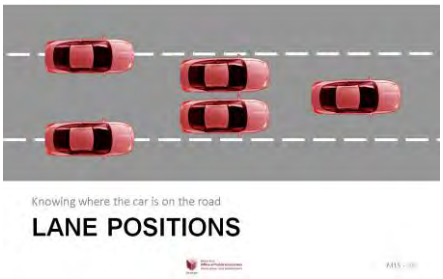
If we back him up we to where we can see him completely we see that he has to move about 4-5 meters away from the car. We can't see the space between the front of the car and where he stands.

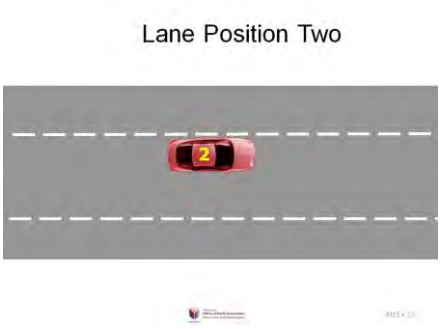
Slide 5 – Vehicle Blind Area

Moving the person to passenger side of the vehicle we see that he has to move away from the car about 3-4 meters.

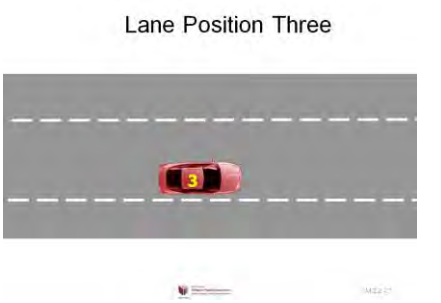
Slide 6 – Vehicle Blind Area **Continuing to have him move around the vehicle we see that he has to move about 4-5 meters away from the car to be able see him completely.**	
Slide 7 – Vehicle Blind Area **The distance to the back is greater than the two car lengths described earlier because of modification to top of the back seat and the addition of head restraints to later model cars. In this particular vehicle the blind area is more 10-12 meters which is a considerable distance that the driver cannot see. Because most SUVs sit up higher the visual area blocked by the vehicle is even greater.**	
Slide 8 – Vehicle Blind Area **From the driver's side looking out to the left you have the smallest blind area of about 2 to 3 meters.**	
Slide 9 – Overcoming Vehicle Blind Area **(Click through the layered photos)** **In the old days of driver training and instruction knowing where a vehicle was and the space it occupied was known as fender judgment. The driver developed a sense of vehicle placement without really being able to describe how or why they knew where the car was or how close it was to other cars. With the development of reference points we can now help novice drivers develop "fender judgment" more rapidly and with more precision.**	
Slide 10 – Reference Points **A reference point is seeing some part of the vehicle as it relates to the roadway and to know precisely where the vehicle is actually located. As mentioned earlier, the concept of reference points was developed by Fred Mottola of the National Institute of Driver Behaviour and has been used by drivers for many generations. There are many advantages in developing and using reference**	**Purpose of Reference Points** See some part of the vehicle as it relates to the roadway, to know where the vehicle is actually located

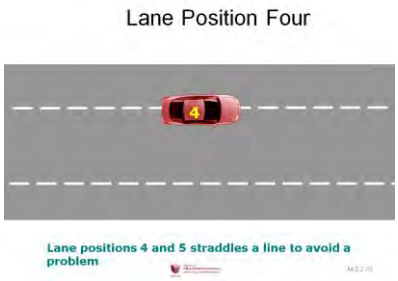
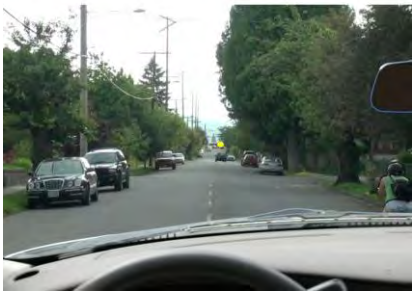
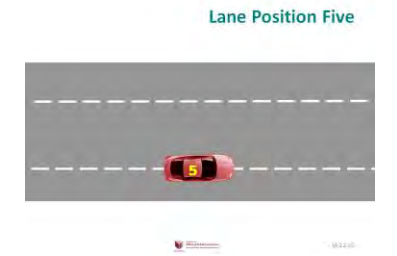
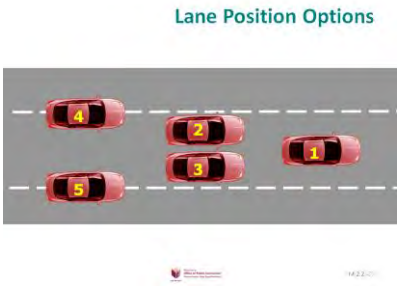
points from parking to backing, from moving to the left and right in traffic, to stopping precisely at a crosswalk or stop line. This skill is foundational to vehicle control and managing the space a car occupies.	
Slide 11 – Reference Points – Front Limitation **The first reference point we want to learn is the one that is associated with the front bumper of the car known as the front limitation. This reference point is used in perpendicular parking, pulling to the stop line or cross walk, pulling to the edge of the curb and myriad other applications in driving.**	
Slide 12 – Reference Points – Front Limitation **This picture is taken from the driver's seat at the front limit. Notice that the line appears to be entering the side of the car just under the mirror. It may look like it enters the vehicle just under the mirror or come into the side of the mirror. What is important is that you discover where the front limitation reference point is for your vehicle and then translate that to other cars or trucks you might drive.**	
Slide 13 – Reference Points – Front Limitation **Interestingly, note that the line appears to be coming into the same location on the driver's side of the vehicle in the exact location as it did on the other side.**	
Slide 14 – Reference Points – Rear Limitation **This car is lined up with the rear bumper on a line behind the car. Since it is the rear of the car it is known as the rear limitation. It is important to know where the back of the car is when backing into a parking space.**	

Slide 15 – Reference Points – Rear Limitation **When you are in the driver's seat and looking over your left shoulder you will see the line appearing in the rear seat window about 12 inches behind the pillar or almost in the center of the window. With practice you can place the rear of the car within 3-6 inches of a line or curb using this reference point.**	
Slide 16 – Reference Points – Rear Limitation **Now look over your right shoulder between the head restraints. Notice that you can see the same reference point on the passenger side of the car. Why do you think it would be important to have a reference point on both sides of the car for both the front and the back of the car?**	
Slide 17 – Lane Positions **A lane position is described as the precise location a car occupies while traveling on the road or highway. Recall that a reference point is seeing some part of the vehicle as it relates to the roadway and knowing the precise location of the vehicle. There are five specific lane positions that all drivers use. Reference points help drivers develop the ability to precisely place the vehicle in each of the 5 positions.**	
Slide 18 – Lane Position One – LP 1 **This is an overhead view of the car in LP 1. Notice that there is equal distance from either line. To help orient you to this picture, the car is moving from the left to the right.**	

Slide 19 – Lane Position One **Looking through the front window of the car we can see that the car is in LP 1. We drive in LP 1 because there is no traffic to our left and no obstructions to our right. Most of our driving is done in LP 1. It gives us the freedom to move to other lane positions when traffic or obstructions present themselves.** **ACTIVITY** **Describe the slide and where the reference point is for LP 1. Have the students see the location of both lines on the dash by looking directly at them. Now tell them to look as far out as they can and see their target. While looking at the target ask them if they can see the reference point on the car. Practice this with each reference point slide to develop the skill of managing their lane position by keeping their eyes up and toward the target.**	
Slide 20 – Lane Position One **This driver has only one lane position available to them. They have to be in LP 1 to create equal space from the approaching car and the parked car. Even though this presentation is about lane position it is an important concept to include a brief discussion about speed control here. Since the only lane option for this driver is LP 1, prudence dictates that the best speed control option for this driver is to slow down to minimize risk.**	
Slide 21 – Lane Position One Applications **LP 1 is used in most driving situations. Our roads are between 10-12 feet wide and most cars are a little over 6 feet wide. In LP 1 you effectively have about 3-4 feet on either side of the vehicle. When centered in the middle of the road the driver creates space between their car, oncoming traffic and objects on the right side of the road.**	
Slide 22 – Lane Position Two – LP 2 **Lane position 2 is about 3-6 inches from the center line of the road.**	

Slide 23 – Lane Position Two **Here we see the center line appear to enter the car about 12 inches from the corner post. We normally don't drive in LP 2 because it puts us closer to oncoming traffic and increases our risk of a crash. We use LP 2 to create space between POT blockages. The right front area of our car has a car parked there and we move over to LP 2 to create more space to move safely around the parked car.**	
Slide 24 – Lane Position Two **LP 2 is used in this case to set up for a curve to the right. Moving to LP 2 when there are no oncoming cars serve two purposes.** **The first is to establish an effective driveline through the curve which helps keep the car in balance.** **The second is to help the driver see more effectively around the right hand curve. If there were a bush or building blocking the driver's view around the curve, the driver can increase her line of vision around the curve by moving toward the center line to LP 2.** **Do the lane position activity here but this time you will notice that there is no target. That's because we don't target in a curve. The driver must look as far through the curve as possible. In this case it is to the edge of the photo. Can the driver still see the LP 2 reference point with their fringe vision?**	
Slide 25 – Lane Position Two Applications **Improves your line vision around a right hand curve.** **Creates space between your car and an object on the side of the road.** **Sets up your driveline through a right hand curve.**	

Slide 26 – Lane Position Three **LP 3 is toward the right lane edge usually marked with a solid white line or the shoulder of the road with no lines.**	
Slide 27- 28 – Lane Position Three **This driver is in LP 3 for three reasons. The first is to create space between her car and the approaching car. The second is to improve her drive line through the curve and set her up for the next curve. The third is to increase her line of vision around those trees on the left in the next curve.**	
Slide 29 – Lane Position Three Applications **Improves your line vision around a left hand curve.** **Creates space between your car and an oncoming car or oversized load—farm equipment, oil drilling rigs, or manufactured homes in transport.** **Sets up your driveline through a left hand curve**	

Slide 30– Lane Position Four **Lane position 4 is technically not a true lane position because we can't continue to travel in this position for any length of time except to pass an obstruction or make a lane change. Lane positions 4 and 5 straddle the line to avoid a problem. In this diagram we see the car in LP 4 straddling the center line**	
Slide 31– Lane Position Four **This picture shows the view from the driver's perspective as the driver passes a bicyclist on the right. We can only use LP 4 when there is no oncoming traffic or the traffic is far enough away that there is time to make the pass.** **When the driver looks up at the target can they still see the bicyclist and their lane position? Have the students look to the target and describe to their partner what they see with their other vision.**	
Slide 32 – Lane Position Five **Lane position 5 positions the car straddling the lane edge marker.**	
Slide 33 – Lane Position Five **Lane position 5 is used to move over and allow others to pass or to create space for an oversize load coming from the opposite direction. It is also used to move over for emergency vehicles.**	
Slide 34 – Lane Position Options **Lane positions 1, 2, 3, 4 and 5 each have important applications to driving. Knowing how and why to precisely place the car on the roadway will help the novice driver develop their "fender judgment" sooner and help them manage the myriad risks they will encounter over a lifetime of driving.**	

Slide 35 - 45 Lane Position Options **Student Activity** **You are sitting in the driver's seat. You will see a picture appear from the inside of the car. Your job is to identify your lane position.** **Look at the pictures and then show your lane position choice by holding up your hand with the correct number of fingers.**	
Slide 46 Entering Traffic **[Play 00.49 second video]** **Mirrors** **Signal** **Mirror** **Over the shoulder** **Target** **Go if it is safe** **MSMOG**	

Updated April 24, 2013